COMMENTS ON DOER NOTICE OF INQUIRY DATED JULY 1, 2005 REGARDING PROPOSED REVISIONS OF RPS PORTFOLIO STANDARDS PERTAINING TO THE DEFINITION OF LOW-EMISSION ADVANCED BIOMASS POWER CONVERSION TECHNOLOGIES

SUBMITTED ON BEHALF OF RUSSELL BIOMASS LLC

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Russell Biomass LLC is currently developing a 50 MW biomass plant in Russell Massachusetts, planned for construction in early 2007 and startup in 2009. Central to the economic viability and financing success of the project is a reasonably predictable and stable Renewable Energy Certificate (REC) price starting in 2009. Our comments address the value to the RPS program of allowing stoker-fired boilers as a qualifying technology.

We start with the assumption that the primary objective of the RPS program is to stimulate development of new renewable energy. While the environmental benefits of the RPS program are important, it is not the purpose of the program to reduce environmental emissions without increasing renewable energy supplies, such as would generally occur with a retrofit of an existing biomass plant – using any technology – unless that plant were to shut down if it could not receive the REC benefits. With this in mind we think it important to differentiate between two important objectives:

1 Maximizing the development long-term of new renewable energy supplies

2 Meeting lowest possible emissions and other environmental standards

A stoker-fired technology should qualify for the RPS program if its use meets both of the above objectives.

Biomass and wind are the two generic energy sources with significant potential for long-term renewable energy supply. The over-arching goal of the RPS program should be to support the long-term marginal cost – hence financeability of this capacity. We believe that:

- A retrofit of an existing biomass plant (using any technology) should not qualify for RECs unless the plant would otherwise shut down, or would produce partial benefits (see next point).

  Note: We acknowledge the fact that fluidized bed boiler conversions of existing biomass plants now qualify for RECs, and we do not see how that advances the primary purpose of the RPS program. But, as a minimum, we argue here that a stoker-fired retrofit of an existing biomass plant does not necessarily increase the amount of new renewable energy supply.

- To the extent that a retrofit of an existing biomass plant would allow the following, some proportional amount of RECs would be warranted:

    - Environmental emissions are reduced for the same level of output

        Note: While the RPS program is designed to stimulate new renewable energy, if environmental benefits alone are deemed sufficient then the above criterion would be worth considering.

    - kWh output is increased for the same heat input, i.e., plant efficiency is improved

    - Additional output occurs (beyond the efficiency gains) because of improved economics or other reasons

        Note: Historic records of output can be used to determine what "additional output" is.

- Advanced-design stoker-fired boiler systems (with SCR and CO catalysts) can meet the same NOx, CO and other emissions limits that fluidized bed boilers are required to meet. This assertion needn't be argued extensively because stoker-fired boilers should not be allowed if they cannot meet specified limits. The DOER regulations should allow any boiler technology that can meet the limits to qualify. It is up to the project owners to assure that this occurs or they will forfeit their RECs.

- DEP, not DOER, should set and regulate the lowest possible level of emissions and other limits that renewable energy plants must meet. The maximum qualifying emissions limits (e.g., NOx) specified by DOER are not necessarily the limits that DEP will impose; DEP's limits can be lower, but not higher.

    - The limitations proposed by DOER in Table 3 of the NOI, incorrectly labeled "achievable," are so low that one of two things will occur:

        - They will not allow a plant to be financeable because no operating plant has demonstrated them in operation

        OR

        - The costs of compliance will be so onerous that few, if any, new biomass plants will be financeable because of worse economics

    - The way to improve environmental emissions performance over time already exists in State and Federal air quality regulations that require facilities to apply BACT or LAER for all regulated pollutants. These cause emissions to increase in stringency as new technologies become available and are demonstrated in practice.

- Advanced-design stoker-fired boilers have lower capital and operating costs than fluidized bed boilers, thus allowing financially-viable green-field biomass capacity at a lower power sale price. That is, for the same power sale price (base energy price plus REC), more green-field capacity will come on line if the stoker-fired technology is allowed.

- In the long-term a predictable and stable REC price will be needed to allow green-field biomass plants to be financially viable. Such plants, along with certain wind projects, represent the marginal new renewable energy capacity needed to maximize the renewable energy supply long-term.

  Note: We note that no green-field biomass plant in Massachusetts has submitted major permit applications in the two years that the MA RPS program has been in effect. While the Russell project will submit such permit applications in 2005, it is still not clear that we can obtain the long-term contract REC-purchase or floor guarantee commitments that will allow our project to achieve financing. These commitments require a minimum predictable, stable price.

  Note: Russell Biomass is the second-largest in-state renewable energy project proposed (Cape Wind is the largest).

- The additional economic and environmental (e.g., waste wood recycling) benefits of an in-state renewable energy plant argue for additional benefits for such plants under the RPS program. That is, while it is important in principle to open the RPS program to all of New England, Massachusetts ratepayers should be paying for the maximum possible level of in-state benefits.

  Note: Because price guarantees or other direct financing support provisions are not part of the scope of this NOI we have not included any related comments on them in this submission.

If the stoker-fired retrofits of existing biomass capacity are allowed:

- Allowing retrofits of stoker-fired boilers of existing biomass plants could cause renewable energy supply in the near term (2-4 years) to exceed MA demand, and REC prices could drop precipitously in the 2007-2012 time frame (until demand increases sufficiently and the "stoker retrofit supply surge" is completed). This would adversely affect the financing capability of green-field biomass plants, including the Russell plant, during that time frame.

  Note: From our reading we believe there are about 20-40 facilities representing 400-600 MW of existing biomass generation in New England, most of which would be candidates for retrofit if the stoker technology was allowed. At a 60-90 percent capacity factor (range of industry performance) this represents over 3,000 GWhs per year, more than the CT Class 1 and MA REC demand for 2006 and all or a major portion of demand for the following 5 years.

- In-state projects should be protected from an out-of-state retrofit project surge.

  Note: 95% or the potential retrofit capacity is located out of state. It would be counterproductive to say the least to have out-of-state retrofit projects of existing biomass plants that provide no new renewable energy be the major beneficiary of MA RPS RECs to the economic detriment of in-state green-field projects that promise new renewable energy capacity.

  Note: We think there is a legislative intent question as to whether Massachusetts ratepayers should pay to support any power projects – out-of-state or in-state – that do not increase the amount of renewable energy generation.

- Some conceptual options to support long-term renewable energy supply economics are:

  - Limit the number of years that RECs apply to retrofits – longer for conversions from a fossil fuel to biomass than for existing biomass conversions.

  - Establish two separate GWh demand amounts (classes) for retrofits and green-field plants, with RECs for each auctioned separately

  - Set two different price levels for retrofits and green-field plants, reflecting the different economics of each